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REPORT OF GENERAL SERVICE WORK AND EXTENSION

FOR THE CALENDAR YEAR 1941

Compiled by

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Forest Insect Laboratory
445 U. S. Court House
Portland, Oregon
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REPORT OF GENERAL SERVICE WORK AND EXTENSION FOR CALENDAR YEAR 1941

This is the sixth annual summary of general service work carried on by the Portland forest insect laboratory. As heretofore in this series of reports, all requests for information are included, except those for specific published material and those concerning control and surveys originating from cooperators.

A total of 353 inquiries were received during 1941. Two hundred and thirteen, or 60 percent, of these requests were in the field of forest entomology. As compared with 1940, this represents an increase of 44 in the number of inquiries, but the relative abundance of forest insect problems remained practically unchanged. Again in 1941 a number of requests concerning insects in the central and southern Rocky Mountain Region were handled by the Portland laboratory.

Letters and memoranda in response to requests totaled 128 during 1941, as compared with 93 in 1940. During the year just past 20 personal examinations were made. Distribution of published material totaled 384 copies, of which nearly three-fourths were mimeographed separates of an article redescribing the Keen classification of ponderosa pine.

Fewer noteworthy records were obtained than for several years past. The following are the principal items of interest regarding the inquiries received during 1941. (1) Calls concerning carpenter ants outnumbered those concerning any other insect. (2) Reports of borers in building timbers continued to be abundant. (3) An outbreak of the green spruce aphid, Aphis abietina Walk., on Sitka spruce along the Oregon and Washington coast prompted several inquiries. (4) A local outbreak of the spruce budworm on white fir and lodgepole pine in the Warner Mountains was brought to our attention. (5) So-called parch blight, a winter injury to Douglas fir, was prevalent in the vicinity of Portland and was reported as insect-caused damage by several people.

INSECTS AFFECTING FOREST PRODUCTS

Inquiries concerning insects affecting forest products totaled 150 in 1941, an increase of 9 over those in 1940. Requests in this group comprised 43 percent of the total number, thereby considerably outnumbering those in any other groups.

Camponotus spp. Carpenter ants continued to cause more inquiries than any other single problem. A total of 59 calls concerning carpenter ants were received, all during the period from April through September. Treatment with sodium fluoride was generally recommended, but dusting with 4 percent rotenone was suggested in a few cases. Preliminary indications from this limited testing of rotenone are that this dust is quite effective in controlling carpenter ants; however, insufficient data are at hand to fully substantiate this point.

Termites. Thirty-five calls concerning termites and termite control placed these insects second only to carpenter ants in the amount of attention received. By far the largest number of cases (30) involved the dampwood termite, Zootermopsis angulicollis Hagen. This termite, in our experience, has been found only in association with dry rot which is considered as the primary agent of destruction. In some cases Zootermopsis has, by extending its galleries into sound wood, supplemented damage caused by rot. Effective control consists of making structural changes to eliminate the condition favoring development of rot and establishment of the termites.

Five authenticated cases of infestation by Reticulitermes hesperus Banks, all in the city of Portland, were noted during the year. In each case faulty construction was the underlying cause of infestation. The comparative scarcity of damage by the subterranean termite in the Pacific Northwest has been a matter of considerable speculation in view of the established presence of this insect and the comparative lack of precautions to guard against its damage. It is a matter of record, however, that a yearly average of only one or two infested buildings have been reported to the Portland laboratory during the 12 years of its existence. During that time the laboratory personnel has not once collected the subterranean termite in the wild in the region west of the Cascades in Oregon and Washington; that is, no specimens have been taken in stumps, down logs, or other waste wood that abounds in this region.

Powderpost beetles. Damage caused by powderpost beetles was reported in 13 cases, 1 more than in 1940. Lyctus was involved in 10 cases, 9 in which oak flooring in Portland was infested and 1 in which stored rake handles were seriously damaged at Eugene, Oregon. Three examples of anobiids infesting coniferous timbers in houses were noted. It is of interest that, in the genus Lyctus, L. planicollis Lec. has been most commonly taken at Portland, but that L. cavicollis Lec. has also been taken on several occasions. Control consisting of one to several applications of turpentine and kerosene (9:1) has been generally recommended for Lyctus and has given uniformly good results.

Borers infesting building timbers. Wood borers emerging from wood in houses prompted 18 inquiries, 2 more than in 1940. Buprestis-caused damage to flooring, structural timbers, siding, and interior trim was reported in 9 instances. The remaining 9 inquiries concerned other borers, mostly cerambycids, emerging from newly constructed houses. Reports of borer damage in the latter category have been notably abundant since there has been general use of lumber cut from fire-killed trees on the Tillamook Burn in Oregon. Much of this lumber contains borers in various stages of development.

Borers infesting cordwood. Although there was a marked decrease in the number of reports of insects emerging from cordwood (18 in 1941 as compared with 34 in 1940), this group of insects was still one of the leading sources of concern to property owners. Primarily this problem is one of borers emerging from stored oak and to a lesser degree from maple and ash. Fortunately the much more widely used Douglas fir gives little trouble in this respect. The species of insects emerging from cordwood varies little from year to year. The following species, which have all been frequently taken under these circumstances in the past, were recorded in 1941: Neoclytus conjunctus (Lec.), Xylotrechus nauticus (Mann.), Phymatodes obscurus Lec., Pseudopityophthorus pubipennis (Lec.) and Leperisinus sp. The last named emerged from Oregon ash (Fraxinus oregona) and the other four from Garry oak (Quercus garryana).

Borers infesting shipped lumber. Two interesting cases of this kind were reported. In one instance siricids emerged in numbers from a carload lot of western hemlock (Tsuga heterophylla) following its arrival in Indiana. In the other case a carload shipment of air-dry ponderosa pine (Pinus ponderosa), represented by the shipper as being kiln-dried, was sent to a novelty concern in Massachusetts where it was found to be infested by a cerambycid, presumably Callidium antennatum. This pine lumber was cut from burned timber on the Whitman National Forest and very likely was infested prior to the time it was cut into lumber.

INSECTS AFFECTING FOREST TREES

A total of 50 inquiries, concerning 34 subjects in this group, were more diverse than usual and outnumbered those of the preceding year by 14.

Dendroctonus brevicomis Lec. Requests concerning the western pine beetle were received in approximately the same numbers as heretofore. Inquiries concerning recent advances in sanitation-salvage methods of pine beetle control were made by three pine operators. The remaining three inquiries were for information on pine beetle losses on specific timber holdings. The status of pine beetle infestation will be discussed at length in various survey reports covering the pine forests of Oregon and Washington.

Dendroctonus monticolae Hopk. A flare-up of mountain pine beetle infestation of white pine (Pinus monticola) in the Washington Cascades was observed by the station personnel to be rather general in 1941. Local centers of infestation were noted on the Columbia and Snoqualmie National Forests and in Mount Rainier National Park. Two reports from outside sources were received concerning this situation.

Dendroctonus pseudotsugae Hopk. Three inquiries concerning the Douglas fir beetle were received. These involved no outbreak of a serious nature. Observations made by the station personnel indicated that this insect was quiescent in the Douglas fir region during 1941. The outbreak recorded last year in the White River recreation area of the Snoqualmie National Forest and the adjoining area in Mount Rainier National Park was noted to have subsided as a result of natural causes.

Aphis abietina Walk. A rather general outbreak of the green spruce aphid was present on Sitka spruce (Picea sitchensis) along the coast of Oregon and Washington. This outbreak was reported from six widely separated localities and in addition was observed by the station personnel. In the Puget Sound area ornamentals of several species of spruce were seriously defoliated.

Phytoptus pini Nalepa. In August, infestation of ponderosa pine in the Thorn Prairie Plantation of the Umpqua National Forest by this eriophyid mite was brought to our attention. A heavy population of the mite was associated with a yellowing and shortening of the needles on approximately half of the 1941 growth. This is our first record of this type of injury to pine in the Northwest.

Recurvaria sp. In May, larvae of an unidentified species of Recurvaria were received from the vicinity of Las Vegas, New Mexico. The forest ranger, Mr. M. M. Bruhl, who collected the material from ponderosa pine, estimated that the infested area was approximately five miles long, but that heavy defoliation was confined to an area only one mile in length.

Thricolepis inornata Horn. Considerable damage to the terminals of Douglas fir (Pseudotsuga taxifolia) saplings caused by feeding of this weevil was reported in September. The infested area was near Green's Peak on the Apache National Forest, Arizona. In a letter of identification Mr. L. L. Buchanan stated that the species is a general feeder that has also been taken on cherry, oak, Pinus, and Robinia.

Halisidota ingens Hy. Edw. During May, a rather general infestation of ponderosa pine by caterpillars of the southwestern tiger moth was reported in the vicinity of Las Trampas, New Mexico. Damage was not heavy.

Archips fumiferana Clem. A budworm, considered to be the spruce budworm but not yet authentically determined as such, was reported on July 24 as infesting white fir (Abies concolor) and lodgepole pine (Pinus contorta) near Willow Point Lookout in the Warner Mountains, Fremont National Forest, Oregon. Examination of the area on August 16 by W. J. Buckhorn revealed both the pine and fir to be heavily defoliated. At the time of examination emergence had occurred and only a few adults were taken in flight. This outbreak is the first in Oregon that has come to our attention.

INSECTS AFFECTING SHADE AND ORNAMENTAL TREES

Thirteen requests were received concerning insects in this group as compared with 18 in 1940. Aphids on various ornamentals predominated. There were no records of a noteworth nature.

GENERAL ENTOMOLOGY

A total of 102 entomological problems in fields other than forest entomology were received. This is an increase of 30 over those received in 1940. There were no records of particular note.

UNCLASSIFIED

The usual diversity of inquiries not pertaining to entomology was again evident. Thirty-eight such inquiries were received and were referred to the proper sources of information.

Parch blight. Winter injury to Douglas fir in the vicinity of Portland caused general concern during April and May when the dead foliage became especially noticeable. Nine inquiries were received at the laboratory concerning this condition. Parch blight is of relatively common occurrence in the Portland area and has been attributed to excessive loss of moisture through transpiration during cold weather. This condition is principally evident on the east side of trees subject to the cold, dry, winter winds that at times blow westward through the Columbia Gorge.

RESUME OF REQUESTS

Classification	1937	1938	1939	1940	1941	Average Distribution Percent
Insects affecting forest products	62	89	107	141	150	40.7
Insects affecting forest trees	17	30	33	36	50	12.3
Insects affecting shade and ornamental trees	30	27	19	18	13	7.9
General entomology	42	58	70	72	102	25.5
Unclassified	21	46	35	44	38	13.6
Total	172	250	264	311	353	100.0

OCCURRENCE OF REQUESTS BY MONTHS, 1937-41

Month	1937	1938	1939	1940	1941	Average Distribution Percent
January	5	14	8	13	15	4.1
February	3	12	9	16	11	3.8
March	6	10	22	26	30	7.0
April	7	29	45	50	43	12.9
May	23	51	36	54	42	15.2
June	9	24	39	28	37	10.1
July	36	31	22	36	46	12.7
August	28	29	31	33	40	11.9
September	21	23	14	19	40	8.7
October	18	13	18	17	28	7.0
November	13	7	13	10	17	4.4
December	2	7	7	8	5	2.1
Unaccounted	1	—	—	—	—	0.1
Total	172	250	264	309	354	100.0

PUBLICATIONS DISTRIBUTED

Item	Number distributed
Ponderosa pine tree classes redefined. Mimeographed	277
Western hemlock sawfly, *Neodiprion tsugae* Middleton, and its parasites in Oregon. Jour. Econ. Ent. separate	36
Insect enemies of western forests. USDA Misc. Publ. 273	12
Forest insect conditions in Oregon and Washington, 1933-1938. Mimeographed	6
Climatic cycles in eastern Oregon as indicated by tree rings. Monthly Weather Review separate	2
Forest Entomology Brief 76. Borers in shade trees and hardy shrubs	1
Forest Entomology Brief 79. General information on aphids that attack shade trees and hardy shrubs	2
USDA Leaflet 101. Injury to buildings by termites	13
USDA Leaflet 144. Cockroaches and their control	1
USDA Leaflet 145. Clothes moths	2
USDA Leaflet 146. Bedbugs	1
USDA Leaflet 147. House ants	9
USDA Leaflet 149. Silverfish	1
USDA Leaflet 150. Carpet beetles	1
USDA Leaflet 161. The eastern tent caterpillar	1
USDA Leaflet 184. The elm leaf beetle	2

Item	Number distributed
USDA Circular 176. Observations on the satin moth and its natural enemies in central Europe	1
USDA Circular 189. Control of the satin moth by spraying in alternate years	1
USDA Circular 459. Effectiveness of imported insect enemies of the satin moth	1
Bureau of Entomology & Plant Quarantine E-472. The European earwig and its control	1
USDA Defense Circular 2. Termites	1
USDA Farmers' Bulletin 1260. Stored grain pests	1
USDA Farmers' Bulletin 1472. Preventing damage by termites or white ants	6
USDA Farmers' Bulletin 1477. Preventing damage by Lyctus powder-post beetles	2
USDA Farmers' Bulletin 1495. Insect enemies of the flower garden	1
USDA Farmers' Bulletin 1824. The Black Hills beetle, a serious enemy of Rocky Mountain pines	1
Total	384

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